Name:

at1110paper_practice_test (v106)

1. Solve the equation with factoring by grouping.

$$15x^2 + 12x + 10x + 8 \;=\; 0$$

$$(3x + 2)(5x + 4) = 0$$

$$x = \frac{-2}{3} \qquad x = \frac{-4}{5}$$

2. Expand the following expression into standard form.

$$(3x - 7)^2$$

$$9x^2 - 21x - 21x + 49$$

$$9x^2 - 42x + 49$$

3. Expand the following expression into standard form.

$$(2x + 3)(2x - 3)$$

$$4x^2 - 6x + 6x - 9$$

$$4x^2 - 9$$

4. Expand the following expression into standard form.

$$(6x + 7)(8x - 5)$$

$$48x^2 - 30x + 56x - 35$$

$$48x^2 + 26x - 35$$

5. Solve the equation.

$$(3x + 2)(4x + 9) \;=\; 0$$

$x = \dfrac{-2}{3}$ $\qquad$ $x = \dfrac{-9}{4}$

6. Factor the expression.

$$49x^2 - 64$$

$(7x - 8)(7x + 8)$

7. Factor the expression.

$$x^2 + x - 72$$

$(x - 8)(x + 9)$

8. Solve the equation.

$$7x^2 + 13x - 54 \;=\; 5x^2 + 4x + 2$$

$2x^2 + 9x - 56 = 0$

$(2x - 7)(x + 8) = 0$

$x = \dfrac{7}{2}$ $\qquad$ $x = -8$